

# WARTA PASCA

postgraduate newsletter



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**2013**



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# Dean's greetings,

Dear Graduants and graduate students,  
Congratulations!

On behalf of CGS staff and myself, I would like to congratulate all of you graduating during this convocation. We at CGS feel very happy and overjoyed for what you have achieved today. Hopefully the success of today will be the starting point to a better future. I am sure that you have brought pride to your family especially your parents. We wish your success will become an inspiration to other graduate students in order to achieve the same success in the coming years.

The increasing number of graduants from year to year creates a proud UNIMAS as well as CGS in particular. Since the establishment of CGS on 1 April 2003, we have achieved a wide range of success. Most recently is our accomplishment in obtaining MS ISO 9001:2006 accreditation and successfully going through a process of accreditation from the Malaysian Qualifications Agency (MQA). This is a triumph for UNIMAS and CGS and a sense of pride and accomplishment for the year, that culminates in our pride in you graduating.

Today CGS is proud to have a variety of student success in a variety of endeavors. There are those who have become recipients of the Vice Chancellor Research Fellowship, a variety of scholarship for students, winning awards, best paper, and best poster, at various local and international conference presentations. This success showcase the opportunity available at UNIMAS as well as providing an opportunity for graduates to gain as much experience as possible and build a network of friends who could be applied either in their future work or life. Success has been sweet, yet it is hoped that students and staff efforts and guidance for the realization of graduate students dream will be continued in order to achieve the dreams that brought them to UNIMAS.

Congratulations again from me and my staff at CGS. Our prayers and best wishes for those graduating and also to those continuing their studies.  
Congratulations.

Prof Dr Ernest Cyril De Run  
Dean

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## Lawatan Kerja di Pusat Pengajian Pascasiswazah UMS



Satu lawatan kerja rasmi telah diadakan pada 23 Ogos 2013 di Pusat Pengajian Pascasiswazah Universiti Malaysia Sabah (UMS). Lawatan kerja ini dianggotai seramai 15 orang kakitangan Pusat Pengajian Siswazah Universiti Malaysia Sarawak (UNIMAS) yang dianggotai Ketua Penolong Pendaftar Encik Azlan Ramli. Lawatan kerja ini turut diiringi oleh Dekan Prof Dr Ernest Cyril De Run dan Timbalan Dekan Prof Madya Dr Wan Azlan Wan Zainal Abidin.



Rangka lawatan ini khusus untuk melihat (bagaimana) proses kesediaan UMS di audit oleh pihak Agensi Kelayakan Malaysia (MQA). Ini berikutan Pusat Pengajian Siswazah UNIMAS akan di audit oleh pihak MQA pada 17-19 September 2013.

Dengan adanya lawatan sebegini, diharap agar Pusat Pengajian Siswazah dapat mengadaptasi mana-mana persediaan yang terbaik sebagai langkah untuk di audit mengikut acuan UNIMAS sendiri.





# UNIMAS International Festival 2013

By Prof Dr Kasing Apun  
Head, International Affairs Division

UNIMAS organised an International Festival 2013 on 22 October 2013 from 10.00 am to 10.30pm. The event themed "Celebrating

1World" is the 4th cultural festival organized since UNIMAS opens its door to international students. The events was organised primarily to acknowledge and celebrate the diversity of UNIMAS international students as well as staff, hence the theme "Celebrating 1World". It gave an opportunity for the international students and staff to showcase their unique culture and food to the UNIMAS community. In line with the internationalisation initiative, UNIMAS continues to attract students from all over the world to enroll

in its various programmes as a gateway to a better future. This year the strong presence of more than 400 students from 48 countries and expatriate from more than 10 countries had given a unique and international dimension to the campus and community as a whole.

This one-day event was held at DeTAR PUTRA, UNIMAS and started with an exhibiton of traditional food and culture from 16 different countries including China, Nigeria, Pakistan, Tajikistan and Zimbabwe. The event

was officially launched by the Vice-Chancellor, Prof Dato' Dr Kadim Suaidi. Visitors to the exhibitions sampled traditional food such as Chicken Karai (Pakistan), Obe (Nigeria) and Pulao (Tajikistan). Side activities such as quizzes and session to learn some foreign languages was also available throughout the day. The highlight of the festival was the culture performance at Arena Gemilang, DeTAR UNIMAS. A total of 12 performances comprising dance and song was presented throughout the night. The international community was decked in their traditional costumes so it was an exciting and colourful event. It was certainly the best opportunity for everyone to get to know and appreciate the culture, food and tradition of the various countries without even the need to travel out the Kuching. In process, UNIMAS hope the local students and UNIMAS citizens will have better appreciations of other cultures and expanding their global outlooks.







## Visit By Malaysian Qualifications Agency (MQA)

By Azlan Ramli

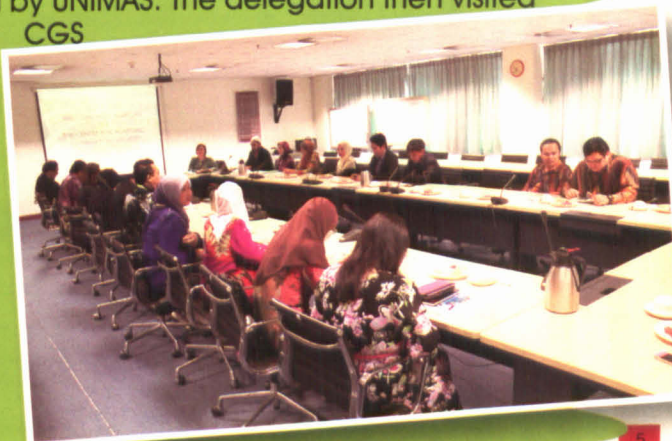
Centre For Graduate Studies (CGS) recently hosted and welcomed panel members from the Malaysian Qualifications Agency (MQA) who conducted the audit on all the graduate (Master and PhD) programmes on 17-19 September 2013. The Vice-Cancellor of UNIMAS, Prof Dato' Dr Kadim bin Suaidi briefed the members on UNIMAS and its graduate programmes.



Leading the delegation was Prof Emeritus Dr Muhamad Awang, the Chairman of the MQA Accreditation Panel. He was accompanied by Assoc Prof Dr Valerie Rose, Secretary of the Accreditation Panel, Prof Dr Chang Lee Hoon, Prof Dr Mohd Yunus Abdullah, Prof Dr Ir Riza Atiq Abdullah OK Rahmat, Assoc Prof Dr Mazani Hj Manaf, Assoc Prof Dr Thillaisundram Arumugam, Assoc Prof Dr Rozainee Khairudin and Assoc Prof Dr Ab Aziz Shuib. Also in attendance were the secretariat from MQA.

The delegation was given an update of the graduate programmes offered by UNIMAS. The delegation then visited the Faculties and CGS

and also held interviews and discussions with staff and students for feedback on the programmes and facilities being offered by UNIMAS.





## Faculty of Economics & Business

Name	Thesis	Supervisor
Abba Mohammed Wakili	Technical Efficiency Of Small Scale Rice Production In Adamawa State, Nigeria	Prof Dr Abu Hassan Md. Isa
Abubakar Salisu Garba	Entrepreneurship Development In Nigeria: A Case Of Micro And Small Enterprises In Kano State	Prof Dr Shazali Bin Abu Mansor
Dwi Sunu Kanto Slamet Widodo	Corporate Reputation: An Alternative Measurement And Empirical Tests Of The Relationship With Financial Performance In The Malaysian Banking Industry	Prof Dr Ernest Cyril De Run
Rabuan Bin Mantine	Wealth Creation And Distribution Through Shariah-Compliant Firms	Prof Madya Dr Mohamad Jais
Tariq Jalees	Determinants Of Luxury Counterfeit Products In Pakistan	Prof Dr Ernest Cyril De Run
Voon Mung Ling	Influence Of Leadership Styles On Academician Commitment To Change: The Impact Of Human Resource Practices And Leader-Member Exchange	Prof Madya Dr Lo May Chiun
Winnie Wong Poh Ming	Antecedents Influencing Customer E-Loyalty And E-Satisfaction Among Malaysians With The Effects Of Trustworthiness	Prof Madya Dr Lo May Chiun

## Faculty of Engineering

Name	Thesis	Supervisor
Abdul Qayoom Jakhrani	Performance Modeling And Size Optimizing Of A Standalone Photovoltaic System	Prof Madya Dr Al-Khalid Othman
Joan Dolly Chung Zie Wei	Trickling Filter With Hexagonal Close-Packed Media For The Treatment Of Domestic Wastewaters	Prof Ir. Dr Law Puong Ling

## Faculty of Resource Science & Technology

Name	Thesis	Supervisor
Bala Anak Jamel	Isolation And Characterization Of GA-20-Oxidase Gene From Sago Palm (Metroxylon Sagu)	Prof Madya Dr Mohd. Hasnain Hussain
Karyati	Ecology And Carbon Sequestration Of Secondary Forests At Sabal, Sarawak	Prof Dr Isa Ipor
Ling Wang Choon	Natural Durability, Preservative Treatability And Protection Of Several Hardwoods Of Sarawak	Prof Madya Dr Andrew Wong Han Hoi
Tay Soon Hiang	Development Of Nanostructured Starch-Based Materials From Native Sago Starch (Metroxylon Sagu)	Prof Madya Dr Pang Suh Cem

## Faculty of Social Sciences

Name	Thesis	Supervisor
Madu Umar Adamu	Appraisal Of The Impact Of A Community-Driven Development Project (Fadama II) In Adamawa State, Nigeria	Dr John Phoa Chui Leong
Wee Ling Min	Money, Power And Conflict Among Married Couples In Urban Sarawak	Prof Dr Hew Cheng Sim

## Faculty of Applied & Creative Arts

Name	Thesis	Supervisor
Ahmad Zuhairi Abdul Majid	Service Innovation Design Strategy For Automobile Service Center In Malaysia	Prof Madya Dr Nazlina Shaari
Mohd Hisham Bin Omar	Kompetensi Teras Pengurusan Reka Bentuk Perabot Enterpris Kecil Dan Sederhana (EKS) Bumiputera	Prof Dr Hj Khairul Aidil Azlin Abdul Rahman

Name	Thesis	Supervisor
Angela Ak Siner	Lansium Domesticum: In Vitro Antimalarial Bioactivity And Its Effect On Plasmodium Falciparum Gene Expression	Prof Dr Janet Cox-Singh
Mohammed Atique Ahmed	Genetic Diversity Of Plasmodium Knowlesi Red Cell Invasion Genes (Pknbpax And Pknbpbx) And Their Association With Parasitaemia	Prof Janet Cox-Singh/ Prof Dr Balbil Singh

## Faculty of Cognitive Sciences & Human Development

Name	Thesis	Supervisor
Sim Khoo Seng	Relationship Between Work-Family Interface, Religiosity And Job-Family Satisfaction Among Selected Hotel Employees	Dr Sopian B Bujang

## Faculty of Computer Science & Information Technology

Name	Thesis	Supervisor
Asma Khatun	An Ellipsoid Based 3D Shape Representation Approach For 3D Object Recognition	Prof Dr Wang Yin Chai
Tariq Zaman	Indigenous Knowledge Governance Framework: A Holistic Model For Indigenous Knowledge Management	Prof Madya Dr Alvin Yeo Wee



Name	Thesis	Supervisor
Abdullah Al Mamun	Relationship Between Corporate Governance and Economic Value Added (EVA): Evidence From Public Listed Companies In Sarawak	Dr Harry Ak Entebang
Arunnan A/L Bala Subramaniam	The Impacts of Trade Integration on Output Growth of Asian Countries	Prof Dr Shazali Bin Abu Mansor
Chong Boon Chiew	Determinants of Dividend Policy in ASEAN-5	Prof Dr Mohamad Jais
Chong Mui Foon	The Relationship between ASEAN Currencies and Renminbi	Prof Madya Dr Venus Khim-Sen Lie
Liew Siew Ling	Macroeconomic Determinants of Capital Flight: An Empirical Study in Malaysia	Prof Dr Shazali Bin Abu Mansor
Lucy Chong Lee Yun	Rational Expectations and Business Forecasts of Malaysian Firms	Prof Madya Dr Puah Chin Hong
Michael Tiong Hock Bing	A Reception Study of Media Marketing Motorcycles	Prof Dr Ernest Cyril De Run
Siti Nur Zahara Binti Hamzah	A Criminometric Analysis of Deviance and Deterrence in Malaysia	Dr Evan Lau Poh Hock
Thurai Murugan A/L Nathan	Energy Consumption and Sectorial Outputs of Indochina Countries	Prof Madya Dr Venus Khim-Sen Lie
Uma Devi A/P Krisnan	Reaction Toward Sexy Advertising: Multiethnic and Gender in Malaysia	Prof Dr Ernest Cyril De Run
William Kong Ying Sung	Power Bases and Perceived Organizational Performance: The Moderating Impact of Mentoring	Prof Madya Lo May Chiun

## Faculty of Cognitive Sciences &amp; Human Development

Name	Thesis	Supervisor
Ngu Wen Woo	Microsoft Speech Recognition as a New Way of Communication in Augmented Reality Environmental	Dr Ng Giap Weng
Oui Wei Wei	Augmented Reality Framework for Symbian Mobile Devices	Dr Ng Giap Weng
Vanisa A/P Karupiah	Organizational Citizenship Behavior: The Contributing Factors and Outcome	Dr Zaiton Bt Hassan

## Faculty of Resource Science &amp; Technology

Name	Thesis	Supervisor
Aizat Bin Japar	Phylogenetic and Systematic Studies of the Amorphophallus Species in Sarawak	Prof Dr Isa Ipor
Anastasia Siera Binti Edward Atif	Differential Expression Gene Profiling Studies on Trunking and Non-Trunking Sago Palm (Metroxylon sagu Rottb.)	Prof Madya Dr Mohd Hasnain Hussain
Angela Tida Ak Henry Ganie	Differential Expression Gene Profiling Studies on Trunking and Non-Trunking Sago Palm (Metroxylon sagu Rottb.)	Prof Madya Dr Ismail Jusoh
Angeline Limok Anak Mong	Optimization Studies for the Inorganic Arsenic [As(III) and As(V)] Determination using Square Wave Cathodic Stripping Voltammetry	Prof Dr Lau Seng
April Ting Pei Jen	Biogeography and the Origin of Extant Species of the Schismatoglottis Nervosa Complex (Araceae: Schismatoglottideae)	Dr Wong Sin Yeng
Aressa Binti Azman	Synthesis and Characterization of Starch and Starch Derivatives Nanoparticles	Dr Chin Suk Fun
Evayantie Wahyuni Zamudin	Bacterial Inoculum Development for Effluents Treatment of Shrimp Farming Industry	Prof Dr Kasing Apun
Evra Raunie Ibrahim	Development of Sago Suspension Culture System and Optimization of Transformation System for Sago Palm (Metroxylon Sagu Rottb.) Cultures	Prof Madya Dr Hairul Azman Roslan
Farawahida Binti Abu Zaharin	Effect of Extractives on Wood Density and Natural Durability of <i>Tristanopsis whiteana</i> and <i>T. beccarii</i> (Myrtaceae)	Prof Madya Dr Ismail Jusoh
Geffry Ujie Anak Joshua	Seed Quality and Longevity during Storage of Four <i>Jatropha Curcas</i> L. Accessions found in Sarawak	Prof Madya Dr Petrus Bulan
Hoe Yin Chen	Systematic Studies of <i>Giamensis</i> and <i>Hanneae</i> Complexes ( <i>Homalomena</i> : <i>Homalomenaceae</i> : <i>Araceae</i> )	Dr Wong Sin Yeng
Julia Anak Sang	Taxonomy Study and Generic Delimitation of <i>Actinodaphne</i> and <i>Nothaphoebe</i> (Lauraceae) Species in Sabah and Sarawak	Prof Dr Cheksum Tawan
Kho Chui Ping	Impacts of Agricultural Activities on the Water Quality of Serin River and the Application of Water Quality Analysis Simulation Program (WASP)	Prof Madya Dr Ling Teck Yee
Kho Sze Yun	Synthesis and Characterization of Silica Nanoparticles and Magnetite/Silica/Titania Core Shell Nanocomposites	Prof Madya Dr Pang Suh Cem
Komathi A/P Balasupramaniam	Utilising Spent Fermentation Broth by Selected Yeasts for Increased Production of Ethanol and Biomass	Prof Dr Kopli Bujang



Lee Wak Ha	Production and Characterization of Ligninolytic Enzymes produced during Biodegradation of Oil Palm Empty Fruit Bunch (EFB) by Indigenous White Rot Fungus that Selectively Degrades Lignin	Prof Madya Dr Awang Ahmad Sallehin Bin Awang Husaini
Liam Anak Dibor	Regeneration of <i>Gonystylus bancanus</i> (Ramin) in Logged Over Peat Swamp Forest in Sibuan and Sri Aman, Sarawak	Prof Dr Cheksum Tawan
Mohamad Rizuan Bin Sarbini	Interaction Between Pathogenic <i>Ganoderma</i> Isolates and Fungi of Suppressive Soil	Prof Dr Seplah Muid
Mohd Farith Bin Kota	Bioremediation Potential of Different Fungal Genera	Prof Madya Dr Awang Ahmad Sallehin Bin Awang Husaini
Monaliza Bt Mohd Din	Morphology and Toxin Study of Puffer Fish Collected from Sabah and Sarawak Waters	Dr Samsur Mohamad
Muhammad Suhaib Mat Hussin	Alpha-Amylase and Endoglucanase from <i>Bacillus amyloliquefaciens</i> UMAS 1002: Gene Characterization and Expression in <i>Escherichia coli</i>	Prof Madya Dr Mohd Hasnain Md Hussain
Noorhana Binti Mohd Sapawi	Diversity, Carbon Stock and Successional Pattern of Understorey Herbaceous Plants in Fallow Shifting Cultivation at Sabal Agroforestry Centre, Sarawak	Prof Dr Isa Ipor
Noorhidayah Bt Mut	Production of Raw Sago Starch Degrading Amylase by <i>Aspergillus flavus</i> in Solid Substrate Fermentation	Prof Madya Dr Awang Ahmad Sallehin Bin Awang Husaini
Norsyarina Binti Welman	In vitro Regeneration of Cryopreserved Nodal Segments and Shoot Tip Meristems of Kapus Bukit ( <i>Dryobalanops beccarii</i> Dyer)	Prof Madya Dr Petrus Bulan
Norrihan Binti Sam	Synthesis, Characterization and Biological Activities of Organotin (IV) Complexes with Hydrazone / Carbohydrazone Ligands	Prof Dr Fasihuddin Ahmad
Nur Atiqah Binti Mohamad Yusoff	The Effects of Estuarine Pollution on Heavy Metals Concentration in Water, Sediment and Selected Edible Mollusc of Sarawak	Prof Dr Shabdin Mohd Long
Nur Sara Shahira Abdullah	Various Molecular Applications in Obtaining Genetic Diversity of Sarawak Saltwater Crocodile ( <i>Crocodylus porosus</i> )	Dr Ruhana Hassan
Nurfaizah Binti Matra	Seeds Cryopreservation and Genetic Diversity of <i>Neolamarckia cadamba</i> (Roxb.) Bosser	Prof Madya Dr Petrus Bulan
Nursyuhaida Md Shahid	Genetic Analyses of Sea Urchin in Malaysian Borneo	Dr Ruhana Binti Hassan
Paschal Anak Dagang	Density Estimation of Plain Squirrel ( <i>Callosciurus notatus</i> ) at Sama Jaya Nature Reserve and Brown Spiny Rat ( <i>Maxomys rajah</i> ) at Kubah National Park, Sarawak	Encik Charlie Justin Laman
Siti Nur Akmar Binti Mohd Yazid	Synthesis and Characterization of Starch Nanoparticles and Carbon Nanodots	Dr Chin Suk Fun
Siti Nurasmah Abu Samat	Kajian ke atas Biojisim dan Kualiti Kayu bagi Tiga Spesies Cepat Tumbuh Hutan Sekunder: <i>Dyera polyphylla</i> (Miq.) Ashton (Jelutong Paya) <i>Duabanga moluccana</i> Bl. (Sawih) dan <i>Endospermum diadenum</i> (Miq.) Airy Shaw (Terbulan)	Prof Dr Isa Ipor
Tchin Boon Ling	Gene-Associated SNP Discovery and Molecular Cloning of Full-Length cDNA of Cinnamate 4-Hydroxylase and Cinnamyl Alcohol Dehydrogenase in a Tropical Timber Tree <i>Neolamarckia cadamba</i>	Dr Ho Wei Seng
Zainah Binti Adam	Geochemical Characterisation of Crude Oils from Offshore of Sarawak and Sabah	Prof Dr Zaini Bin Assim

#### Faculty of Computer Science & Information Technology

Name	Thesis	Supervisor
Azizi Bin Ahmadi	Numerical Modeling of Dielectric Barrier Discharge Plasma Flow	Prof Madya Dr Jane Labadin
Chin Mei Lu	Adaptive System State Based Load Balancing for Web Application Server Cluster of Heterogeneous Performance Nodes	Prof Madya Dr Tan Chong Eng
Lim Boon Hoi	Simplified Link Reliability Schemes for VoIP Over Wireless Networks	Prof Madya Dr Tan Chong Eng
Tai Wai Yee	Enhanced Dynamic Source Routing (EN-DSR) with QoS Based Routing for IPv6 in Ad Hoc Networks	Prof Madya Dr Tan Chong Eng
Wong Siew Mool	RFID Tag Deployment Optimization Scheme for Indoor Navigation for the Visually Impaired Persons	Prof Madya Dr Tan Chong Eng
Yong Soo Fong	Generic Named-Entity Recognition for Sarawak Indigenous Language (NERSIL)	Prof. Madya Dr Alvin Yeo Wee



## Faculty of Applied & Creative Arts

Name	Thesis	Supervisor
Aminah Binti Abd Karim	Duplikasi Watak Dan Pergerakan Wayang Gedek Ke Animasi	Dr Nur Afifah Vanitha Abdullah
Fandi Ahmad Syah Bin Amir Syah	Aplikasi Buluh Dalam Reka Bentuk Aksesori Dalaman Kereta	Prof Dr Hj Khairul Aidil Azlin Abdul Rahman
Khatijah Binti Hanapi	Spesifikasi Personaliti Reka Bentuk Skuter Berdasarkan Citarasa Pengguna	Prof Dr Khairul Aidil Azlin Abd Rahman
Loh Ngilk Hoon	Performance of Real-Time Lip Sync Animation Viseme Based Signal	Prof Dr Hj Khairul Aidil Azlin Abdul Rahman
Nor Adila Binti Mohammad	Strategi Peningkatan Potensi Pelancongan Warisan Budaya Yang Efektif Di Kawasan Batang Ai	Dr Noria Ak Tugang
Sharifah Fazwa Azima Bt Wan Mustapha	Kepuasan pengunjung Terhadap Kualiti Perkhidmatan Semasa Festival Layang-layang Antarabangsa Borneo ke-6 di Bintulu, Sarawak.	Encik Shaik Azahar B. Shaik Hussein
Soffie Balqisbernard Bt Abdullah @ Sophy Bernard Betti	Keperluan Penguasaan Kemahiran Pendidikan Seni Visual Sekolah Menengah Untuk Guru-Guru Seni Di Sarawak	Dr June Ngo Siok Kheng
Suhaifa Binti Ab Wahab	An Assessment of Sarawak's Indigenous Design Focusing on Daily Uses Domestic Tools	Prof Madya Dr Nazlina Shaari

## Faculty of Medicine & Health Sciences

Name	Thesis	Supervisor
Lily Lim	Undergraduate Nursing Student's Experiences of Their Clinical Practice	Dr Zabidah Putit
Mohamad Razif Bin Othman	Immunophenotyping Characterisation and Evaluation of Minimal Residual Disease (MRD) in Acute Leukaemia Patients in Sarawak by Flow Cytometry	Prof Dr Lela Hj Su'ut

## Faculty of Social Sciences

Name	Thesis	Supervisor
Ivy Anak Jugah	A Study Of N.29 Batang Air State Constituency By-Election, Lubok Antu In 2009	Dr Neilson Ilan Mersat

## Institute of Biodiversity & Environmental Conservation

Name	Thesis	Supervisor
Anna Norliza Zulkifli Poh	Habitat Characteristics and Overlap of Small Cetaceans in Kuching Bay, Sarawak, Malaysia	Prof Dr Andrew Alek Tuen
Hii Kieng Soon	Molecular Characterization of the ITS2 Transcript and Saxitoxin Biosynthetic Genes in Two Dinoflagellates, Alexandrium (Dinophyceae) From Malaysia	Dr Leaw Chui Pin
Teng Sing Tung	Morphological Characterization and Molecular Detection of Potential Harmful Diatom, Pseudo-Nitzschia from Malaysian Water	Dr Leaw Chui Pin

## Institute of Health & Community Medicine

Name	Thesis	Supervisor
Anna Andrew	Cloning and Expression of E1 and E2 Genes of Chikungunya Virus in Escherichia coli and Baculovirus Systems	Dr Magdeline Sia Henry Sum



## GRADUATING STUDENT- PhD

Faculty of Medicine & Health Sciences  
Doctor of Public Health

1 Ho Ai Chia

## GRADUATING STUDENT- MASTER

Faculty of Economics & Business  
Corporate Master in Business Administration

- 1 Agnes Lim Siang Siew
- 2 Ahmad Tarmizi Bin Md Isa
- 3 Aina Chin Hui Li
- 4 Amy Chin Ee Ling
- 5 Anthony Lau Tiong Tiing
- 6 Ariana Anak Henry Peros
- 7 Beatrice Anak Wong
- 8 Belinda Voon Mei Yuh
- 9 Bong Tze Mal
- 10 Bong Wei Chen
- 11 Boon Siaw Khim
- 12 Chai Shin Wang
- 13 Chiu Pik Lan
- 14 Chong Chuan Wei
- 15 Chong Min Khiuk
- 16 Christopher Chai Yong Chuan
- 17 Christopher Heng Yong Wei
- 18 Colin Wong Tiing Ping
- 19 Connie Anak Christopher Kesa
- 20 Derrick Pui Len Khan
- 21 Gui Jin Kiant
- 22 Habsah Binti Mohd Sabli
- 23 Hii Hiong Ling
- 24 Jason Jasmy Khong
- 25 Kelly Then Sze Chia
- 26 Koh Yong Sieng
- 27 Lau Yien Hee
- 28 Lily Wong
- 29 Lim Tze Yin
- 30 Lim Wui Kit
- 31 Ling Boo Hiung
- 32 Ling Foo Sien
- 33 Melissa Lee Ing Sze
- 34 Mohamad Danial Bin Beti
- 35 Neeta Syairul Amelia Binti Safian
- 36 Ngu Nguok Ying
- 37 Ngui You Leong
- 38 Nur Amni Batrisya Binti Wadell
- 39 Nurashikin Binti Nazer Mohamed
- 40 Ollince Anak Tateh
- 41 Phang Chia Lee
- 42 Phang Chia Yi
- 43 Queenie Chua Nam Sie
- 44 Sharifah Rodziah Bt. Sayeed Aman Ghazali
- 45 Shirley Bong
- 46 Sia Chiew Lan
- 47 Siti Fattimah Zahra Binti Khaidzir
- 48 Siti Srikuntanti Binti Mohamad Askar
- 49 Stellia Djapri
- 50 Susan Thian Su Zhuang
- 51 Teo Tai Wang
- 52 Tong Hui-Hui
- 53 Tyson Teo Chih Soon
- 54 Voon Soon Ping
- 55 Wong Chiung Kiet
- 56 Wong Siew Ting
- 57 Zunita Binti Bujang

Faculty of Computer Science & Information Technology  
Master of Advanced Information Technology

- 1 Abdalla Hassan Gharib
- 2 Fu Swee Tee
- 3 Marlene Valerie Lu Ai Siok
- 4 Mohd Khairun Nasir Bin Sa'Adi
- 5 Nuraya Binti Abdullah

Faculty of Resource Science & Technology  
Master of Environmental Science (Land Use and Water Resource Management)

- 1 Adeline Anak Edwin Amin Takong
- 2 Cartina Luyau Anak Sulau
- 3 Castro Michael
- 4 Chin Siaw Yin
- 5 Eva Kristin Anak Larry Sait
- 6 Goh Khia Leng
- 7 Haneefa Aniza Bt Hassan
- 8 Hasanaliza Binti Bujang Abdillah
- 9 Ivy Moh Heng Shi
- 10 Mohamad Arfan Johari
- 11 Nathan Achuk
- 12 Nurzaifah Binti Zainal Abidin
- 13 Nurzawani Binti Md Sofwan
- 14 Rusmah Bt Muhammad Ishak
- 15 Siti Faridah Binti Hassan
- 16 Siti Meliah Binti Sebi Joney
- 17 Siti Nurbaidzuri Binti Reli @ Raily
- 18 Vincent Lau Hui Chek
- 19 Willy Chin Siaw Min

Faculty of Engineering  
Master of Engineering (Civil)

- 1 Afdal Haziq Bin Mohamad Salehe
- 2 Lee Fung Choo
- 3 Lee Shyue Leong
- 4 Lim Hung Ling

Faculty of Cognitive Sciences & Human Development  
Master of Science (Human Resource Development)

- 1 Audrey Anak Piroos
- 2 Augustus Anak Umpie
- 3 Baun Inu Pu'Un
- 4 Fiona De Rozario
- 5 Giyasov Bahtiyor Shokirovich
- 6 Helmi Bin Sumilan
- 7 Jong Jee Leong
- 8 Kushairy Bin Bujang
- 9 Liu Tse Hui
- 10 Masitah Binti Annuar
- 11 Mohammad Faizul Bin Awang Bakar
- 12 Nur-Izyan Binti Rothman
- 13 Patricia Nanny Anak Samuel Lanchang
- 14 Rahman Bee Bt. A. Mohamed Sheriff Sahab
- 15 Safaril Bin Madon
- 16 Saravella Anak Sunday
- 17 Seah Han Rong
- 18 Shiraz Yasmine Binti Khir
- 19 Wilson Anak Simon Michael
- 20 Yakub Bin Abdullah @ Lidum Anak Sampau

Faculty of Social Sciences  
Master of Environmental Management (Development Planning)

- 1 Awang Dulhadi Bin Awang Mat
- 2 Dickens Anak Mambu
- 3 Muhammad Hanif Bin Morshidi
- 4 Niponi Anak Undek

Faculty of Medicine & Health Sciences  
Master of Public Health

- 1 Amirulazman Bin Abu Hassan
- 2 Dhesi Baha Raja Selva Raja
- 3 Diana Anak Jawa
- 4 Hamidi Bin Mohamad Sharkawi
- 5 Irwilla Ibrahim
- 6 Jackson Wong Sonn Tag
- 7 Musalnizan Binti Mustalkah
- 8 Noor Baizura Binti Jamali



# POSTGRADUATE STUDENTS OF FCSHD, UNIMAS CONDUCTED “WORKSHOP ON *THE JOY OF LEARNING*” FOR ICATS’ LECTURERS

by Dr Surena Sabil, Faculty of Cognitive Sciences and Human Development (FCSHD)

On 7th May 2013, the second year post-graduate students of Master of Science in Human Resource Development (MScHRD) from the Faculty of Cognitive Sciences and Human Development (FCSHD), UNIMAS conducted a training programme for the junior lecturers of International College of Advanced Technology Sarawak (ICATS).



Opening Ceremony by Miss Amy Francis Najur, Academics Affairs Manager of ICATS. Also in attendance were Dr Surena Sabil, MSc HRD Coordinator and Madam Sheilla Lim Omar Lim, course lecturer.

The training programme entitled “Workshop on the Joy of Learning” was done as part of the requirement for the subject Design and Management of Training (KMS 6033) as the students are required to develop and deliver a one-day training program to the staff of private companies in Kuching under the supervision and guidance of the course lecturers. With the aim to provide ICATS’ junior lecturers, who have less than 5 years teaching experience, with the knowledge and skills to create a joyful learning environment that will make the process of teaching and learning interesting to both lecturers and students, it is expected that through this workshop the lecturers at ICATS would be able to manage and handle their learners in a better and more professional manner, identify and analyze the learners’ understanding of the subject learned, and create and establish a positive and interesting environment that is conducive for teaching and learning. The workshop began with a welcoming speech from the Training Team Project Leader, Madam Annie Liaw. The opening ceremony was then officiated by Miss Amy Francis Najur (Academic Affairs Manager, ICATS). Also attending the opening ceremony were the course lecturer, who acts as the supervisor for the training programme, Puan Sheilla Lim Omar Lim (Lecturer at FCSHD, UNIMAS) and Dr Surena Sabil (Programme Coordinator for MScHRD and Lecturer at FCSHD, UNIMAS). As many as 35 junior lecturers from ICATS participated in the workshop. The MScHRD post-graduate students acted as the facilitators who helped guide the participants in executing the training modules they had to complete throughout the one-day workshop.



The organizing committee with Dr Surena Sabil (MSc HRD Coordinator) and Madam Sheilla Lim (Lecturer)



Group discussion



A moment with Miss Amy Francis Najur (Academics Affairs Manager, ICATS)



Fun Learning interactive session with guest speaker, Dr Abdul Halim Busari, Head of Human Resource Development Department, FCSHD, UNIMAS.



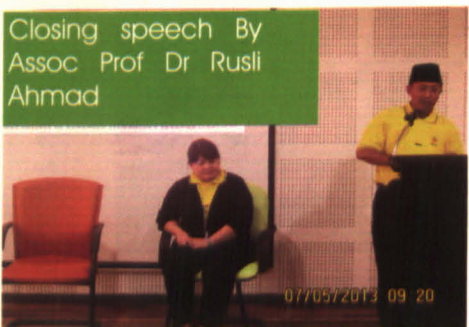
The first module was a group formation activity that saw each participant grouped themselves into four groups. In the activity, the participants were asked to find their group members by imitating the sound or acting like the category of vehicle they pulled out from a box, i.e. motorcycle, bus, lorry and train. Module two, which was titled "Modeling Learners' Understanding: An Introduction to Cognitive Task Analysis", was a lecture session conducted by Dr. Philip Nuli Anding (Lecturer at FCSHD, UNIMAS) and focused on teaching the participants to identify and analyze their learners' understanding of the subject learned. After lunch, the workshop was continued with module three, which was another lecture session titled "Making Learning Fun". The lecture session was conducted by Dr. Abdul Halim Busari (Head of Human Resource Development Department and Senior Lecturer at FCSHD, UNIMAS) and it aimed to guide the participants in creating and establishing a positive and interesting environment that is conducive for teaching and learning. Module 4, which was the final module, consisted of two activities that aimed to improve interaction within the group, impart fun learning environment, and retain the knowledge learnt through fun learning activities. In the first activity named "Chinese Whisper", the participants learned the importance of effective communication and listening skills, while in the second activity "Calming and Focusing", the participants learned how important it is to stay calm and focus during conversation with their students.

The closing ceremony was officiated by the course lecturer, Associate Professor Dr. Rusli Ahmad (Dean of Student Development Centre and Associate Professor at FCSHD, UNIMAS), and Dr. Abdul Halim Busari. Certificates of participation were given to all participants during the closing ceremony.

At the end of the workshop, the participants reported that they were satisfied and truly enjoyed the training and requested for future training collaboration between UNIMAS and ICATS. Other than that, the participants also reported that the workshop provided them with information and skills that are relevant and useful to their daily job, such as how to manage and understand their students better, improve their teaching approach, and create a fun and interesting learning environment. The participants also complimented the speakers and facilitators for their effort and cooperation throughout the workshop. Thus, the training workshop, which fully met the participants' expectations, had achieved its objective in providing the participants with the knowledge and skills to analyze learners' understanding and create a joyful learning environment.



Cognitive Task Analysis session by the guest speaker, Dr Philip Nuli Anding, Deputy Dean of FCSHD, UNIMAS.



Closing speech By Assoc Prof Dr Rusli Ahmad



Communications game.



The Organizing Committee with Assoc Prof Dr Rusli Ahmad and Dr Abdul Halim Busari.



Photo session with Assoc Prof Dr Rusli Ahmad, Dr Abdul Halim and the participants



# UNIVERSITI MALAYSIA SARAWAK

Centre for Language Studies  
Postgraduate Colloquium and  
Language Carnival  
24-25 September 2013



The Centre for Language Studies (CLS) UNIMAS has successfully organised its second Postgraduate Colloquium and Language Carnival on 24-25 September 2013. The two-day event which carried the theme "Colours of Languages", managed to attract a huge crowd which consisted of university and school students and also the public.



The Dean of CLS, Dr. Norazuna Norahim, officiated the opening ceremony with a fleet of colourful balloons to symbolise the chosen theme. In attendance was CLS staff, Deputy Deans, delegates from Universitas Tanjungpura (UNTAN), representatives from other faculties and students.

Various activities were carried out during this exciting two-day event at the carnival. Both participants from UNIMAS and also the general public set up their booths which offered variety of activities for the students and visitors to participate in. One of the main attractions was the language booths exhibition (English, Malay, Mandarin, Japanese, Arabic and French) which offered language and cultural games for the visitors. Visitors who participated in the activities seemed to be satisfied with the prizes won and the knowledge gained from the activities. Besides that, a few language workshops were also conducted at CLS tutorial rooms for the school students. One of the highlights was the Japanese Culture Demonstration Workshop which had left a huge smile on the faces of the school students.



Meanwhile, the postgraduate students presented their research at the language colloquium at Level 3. The Best Presenter award was won by two postgraduate students from UNTAN; Mutayam who presented on "Teachers' Constraints of Teaching at Elementary Schools in Pontianak" and Dr. Sudarsono who presented on "Plausible Influence of Sinitic Languages of Bakatik Dayak Language". The award was also won by CLS postgraduate students; Alpha Bodian who presented on "Motivational Factors in Learning French as a Foreign Language in Malaysia" and Puah Yann Yann who presented on "Gender Differences in Language Attitudes Among Hokkien Speakers".

Exhibitors who took part in the event included established names such as OurYouth.my, Edition 99 Sdn. Bhd. and Public Mutual. Other vendors who added colours to this event included Ding Tea, Fit2Shape, Premiere Marine & Scuba Centre, Each A Cup, Burger Orang Miri and also Relong Enterprise Sdn. Bhd. Event-goers were also seen to enjoy participating in the language carnival and at the same time enjoying the food and beverages sold while strolling around.

With the success of the second CLS Postgraduate Colloquium and Language Carnival, it inadvertently signifies that CLS is indeed one of the centres of excellence in both research and academics in UNIMAS.

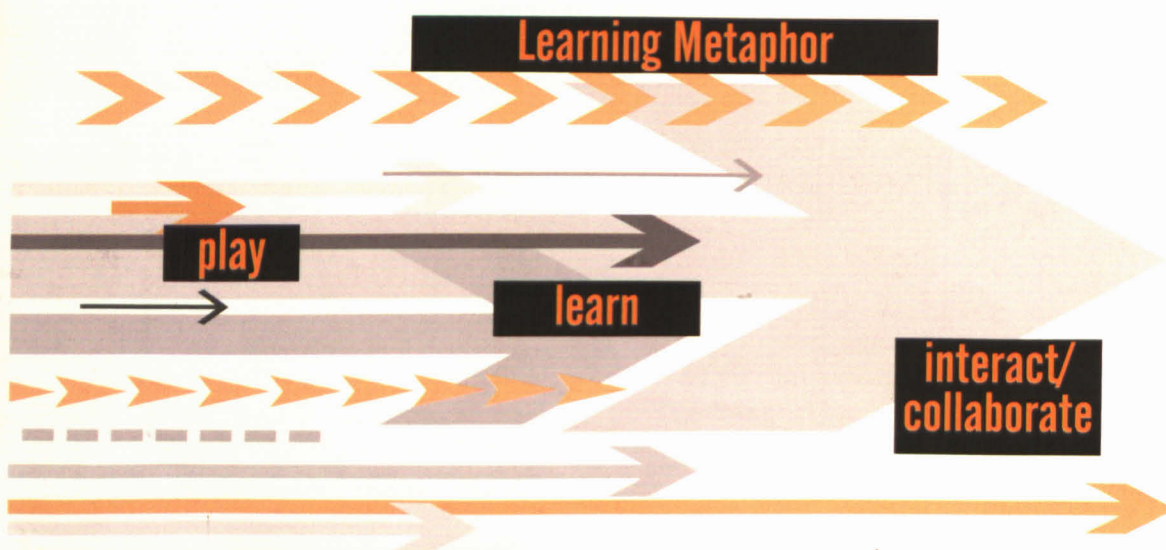


# JOM!

## Learning Park : An Interactive Collaborative Learning Tool

A good collaborative learning tool is said to have the components of engagement, interactivity and competition which is all what this research is about. This research proposes the use of an advance mouse technology to support interactivity and collaboration between learners. The developed system will be able to support a few mice working independently on a single PC and display. The design of the activities is designed in such a way that a few players will have to collaborate and interact with each other and then operate their mouse to come out with the solution. The general design of the system is based on social media games which are currently popular.

Children today are growing in a media saturated world. The use of multimedia has become a norm in their daily routines especially in learning. For primary and secondary school's pupil, a wide variety of courseware are available for all kinds of subject. These courseware usually consists of some interactive activities to help students in mastering the topic. This however, did not gain much popularity among students. One of the primary factors found is that these activities are designed to be accessed by only one student which students find no excitement and tends to lose interest after that. Learners learn better with collaboration. Research on collaborative learning is not something new but the implementation of it in learning tools is hardly seen.





## The Outcomes

### Learning Engagement



Teacher control mode  
Student control mode

### Interactive Learning



Play in group  
Play individually  
16 in 1 interaction  
strategies

### Cost effectiveness



Play in group  
Play individually  
16 in 1 interaction  
strategies

### Sustainability



Question bank  
Authoring tool

# An overview of the learning tool





# THE BEST OF UNIMAS MPH PROGRAM AND THE JOURNEY THROUGH IT, 2011-2012

By Dr Deburra Peak Ngadan (MPH, 2012) and Dr Eunice Melissa Joseph (MPH, 2012)



UNIMAS Master of Public Health Programme is a full time program for medical doctors who are very enthusiastic, determined and very much interested to specialize in Public Health, that is the science and art of preventing disease, prolonging life and promoting health through the organized efforts and informed choices of society, organizations, public and private, communities and individuals" (Winslow, 1920).

UNIMAS Public Health Programme awards two degrees: Master of Public Health (1 year) and Doctor of Public Health (DrPH) (3 years). The Master of Public Health Program (MPH) is a very challenging, packed and rather stressful program, but with the guidance of experienced, dedicated and qualified lecturers, we were kept abreast with innovative, up to date developments in public health-related issues and community based developments. The learning environment are very conducive and interesting because it involved formal sessions (e.g. lectures, discussion, presentations and seminars) and through hands-on experience (e.g. field trips and visits to relevant agencies).

Public health in practice is not always readily recognized by the people it serves. Its definitions and missions encompassed broad concepts and multiple disciplines. Public health protects our citizens, by creating healthier and safer communities. Public health leadership has recognized the need for instruments, tools, and systems that would enable us to demonstrate and measure the capability of public health specialists to meet the health challenges of our times. It applies the knowledge of many disciplines, including political science, medicine, social work, and management. Bringing these perspectives together can help to improve health and prevent diseases in a population. Why we choose MPH UNIMAS? Public health is an exciting and growing field of study, a diverse and dynamic rewarding field and we choose MPH UNIMAS to gain deeper knowledge in the field and the knowledge to become instructors and experts in our careers. These will prepare us to become leader in our field, as well as enhancing our communication skills and shaping us to become good and knowledgeable public health leaders to serve the population. Putting aside the formality of the education system and course outline of an MPH Program under the UNIMAS Faculty of Medicine and Health Sciences, there were other experiences that we would like to share, namely the "outside classroom experiences".





challenging to be innovative and critical in our thinking regarding the objectives of the visits, observations made, practical parts of the lessons taught in classrooms and most of all, our own perception of the visits. Different reports are needed for different types of field visits which involves switching "thinking caps" for different reports, when needed. This further provided us a basis for critical thinking exercise that would be beneficial for future public health specialists' career development.

Almost all of the field visits are being scheduled, arranged and done by the students, with an exception for perhaps one or two with a lecturer's presence. Transportation, field trip details and arrangements were also done by the students, thus established greater responsibility and accountability amongst us in event management.

When the day came for graduation that demarcate the end of a year's program for Masters in Public Health, we both felt that the past one year has passed with a blink of an eye. It has been one of the best experiences we ever had in a post graduate study. No matter how packed and stressful the program was, it was an enjoyable, memorable and highly intellectually-stimulating for us.

What is this outside-classroom experiences that we are highlighting? MPH program is filled with numerous compulsory subjects that need to be completed within a short time and a series of practical sessions which were arranged by the faculty and the students'. These initiatives were aimed to further enable a better understanding of the subjects and topics being taught within the classroom walls.

We definitely recommend to those who are eager to embark upon a career in the public health field to choose UNIMAS Master of Public Health program. Our experiences were not comparable to others but the learning experiences that we have gained, in and outside classroom was priceless.

These outside-classroom experiences are the field trips, on-site visits, official visits to governmental departments and non-governmental bodies, private organizations and centres. Educational field trips were made to many places, including among others, the Sarawak Statistics Department, Kuching International Airport, Kuching Port Authority, ceramic-making factory, food factory, Laila Taib's Stroke Rehabilitation Centre and even the Sejingkat Power Plant Supply Station.

While some might cringe at the thought of going out and doing a field trip, others might enjoy the trip and experienced firsthand what was being taught for further knowledge enhancement. Some students might detest the thought of writing up reports following a field trip, while there were others who prefer thought reflection more compared to the technical part of writing a formal report. The lecturers were creative in provoking thoughts of the students, by giving minimal guidelines in report writing, and we found it rather





# Title: Automatic Landmarking on 2.5D Face Range Images

Pui Suk Ting

Faculty of Computer Science and Information Technology

Master in Advanced Information Technology

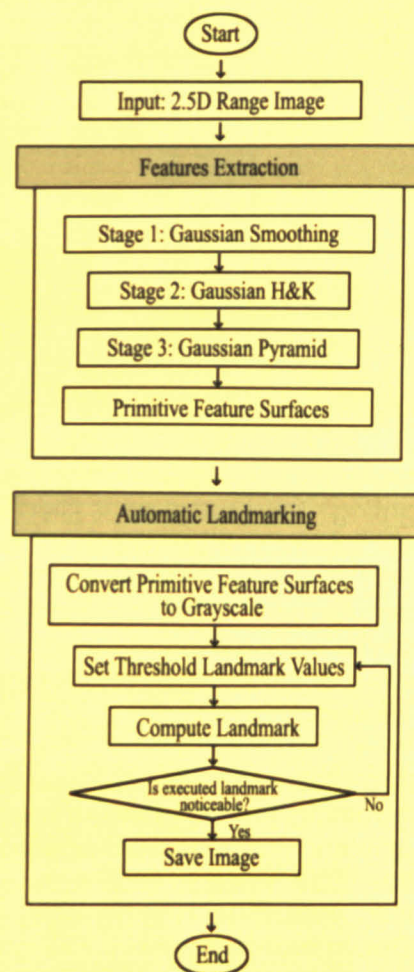
Supervisor: Dr Jacey-Lynn Minoi



The main aim of this research project is to propose and develop a method to automatically identify distinct face features on 2.5D range images. This can be achieved by extracting keypoint known as feature descriptors from various generated keypoints of range maps. The method adopted in this project is part of Scale-invariant Feature Transform (SIFT) that was first introduced by David Lowe [1]. SIFT framework aims to detect and extract keypoint descriptors or local features in images being invariant to scale and rotation changes.

The implementation of SIFT this project is based on three part of the features extraction approach. In the first stage, Gaussian smoothing is applied on the acquired raw images to eliminate lower contrast of keypoints. Secondly, Gaussian Mean and Curvature (H&K) is used to determine the primitive surfaces. In the third stage, Gaussian pyramiding is constructed to perform 'Reduce' and 'Expand' operations. Keypoints are generated though scale-space approach and they are derived using Shape Index and H&K. There are 9 types of keypoints on range map. Landmarking is then computed on the selected keypoints.

Automatic landmarking method has been implemented successfully. We have also developed interactive tools to automatically execute features extraction and the landmarking processes. The method is tested on a set of different threshold values of local pixels sizes. Results have shown that with different threshold values, the identified landmark points on different range maps remain the same.



Flowchart summarizing the automatic landmarking process

## References

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- [2] Tsz-Wai Rachel Lo, J. Paul Siebert: Local feature extraction and matching on range images: 2.5D SIFT. Computer Vision and Image Understanding 113(12): 1235-1250, 2009





## Lynn Wee's PhD Experiences

My Ph.D. journey began when I enrolled myself for candidacy with the Faculty of Social Sciences on 28th of February 2008. A year later, I was awarded a partial scholarship by the university as

an encouragement for my study. Prior to this, I have been lecturing for 10 years at private universities and colleges in Sarawak after graduating with a bachelor's and master's degree from United Kingdom. It took me two years of serious thinking and planning before I finally decided to take the plunge and embark on my Ph.D. This is because I foresee this journey to be not only mentally and emotionally challenging but there will be many sacrifices in terms of time, money and to a certain extent, relationships. Everyone has different motivations for doing a Ph.D. and my main motivation was to push myself beyond my mental limits and emerge stronger as a result. My four years of Ph.D. training have made me wiser, more patient, focused, eloquent, perceptive, and professionally effective than I was before. Pursuing a Ph.D. has been one of the most fulfilling experiences of my life, and I am very fortunate to have been given the opportunity to undertake and complete this significant and meaningful challenge during my four years of study. Even though earning a Ph.D. was a mostly-solitary process, I wouldn't have made it without the generosity of my supervisor and the senior academics from the faculty. My experience with the faculty has been enriching and positive as the working environment is friendly and supportive. I am also fortunate to receive excellent guidance from my supervisor who is an expert in my area of research: Gender Studies.

The broad aim of my study is to explore the household finances and expenditure decisions of urban married couples in Sarawak. More specific aims have been to study couple's understanding of income and how gender and power interact and operate within a marriage. My study focuses on three aspects of the marital relationship which include the control and organization of money, household decision making and personal spending. My key findings suggest that:

Firstly, couples in this study displayed high levels of secrecy in relation to money matters and there is a gendered meaning to money. For many female participants in the study, money played a role in alleviating insecurity and was a means of achieving financial independence. In contrast, the male participants did not speak of financial independence or the need for more money in order to feel secure: they appeared to be more concerned with the proper management and control of money in order to meet the needs of their family at present and in the future. This finding reflects the ideology of the man's

role as main provider for his family and that the women's income is seen as supplementary and earmarked for domestic-related expenditure. Secondly, when it comes to household and expenditure decision making, very little negotiation took place among the couples. In fact, the couples followed an 'invisible gender script' which is made up of prescribed gender roles which are enacted by them more or less unconsciously in their everyday dealings and when making large and small decisions. This gender script consists of actions and behaviours which couples observe around them and such behaviours appear to be appropriate or natural way of doing things. This finding indicate the ability to use money as a power tool to negotiate within marital relationships is limited as it is mediated by more influential factors such as gender role ideologies and religious teachings.

Thirdly, the most common type of system adopted by couples in the management and control of their money was the independent management system with couples citing conflict avoidance and financial autonomy as the two main reasons for choosing this system. Even though the independent management system offers greater autonomy over one's income, it however creates reduced visibility in terms of financial transactions among spouses. It is sometimes used by a higher earning spouse to deny access from the spouse with higher income. In addition, it can introduce greater economic inequality for the lower earning spouse due to the combined effects of low income, unequal contributions to joint expenses and the lack of access to the income of the higher earning spouse.

Fourthly, in terms of personal spending, regardless of the level of income, the majority of male participants enjoyed a higher level of personal spending than female participants. Except for a few low income female participants, the majority of females did not explicitly talk about this discrepancy as a form of inequality, or express unhappiness over the matter. Even for those that voiced out their dissatisfaction, they did not directly challenge or confront their husband's spending as they wanted to avoid conflict. These non-confrontational strategies and cautious behaviour reflect men's relative power in marriage.

In sum, the findings from my study revealed that marital power is very much hidden and apart from money, it is affected by more influential factors such as ideologies and religious teachings. Consequently, having more money does not necessarily mean having more control over decision-making process as decision making in a marriage is often guided by gender roles in accordance to one's ideologies, cultural and religious teachings.



## ABSTRACT

# Determinants of Luxury Counterfeit Products in Pakistan



The purpose of this research is to develop a holistic model to understand Pakistan consumers' attitude towards counterfeit luxury products. The model is based on the Theory of Reasoned Action and Theory of Planned Behavior. The model consists of five personal antecedent, four social antecedents, and four additional variables including idealism, relativism, religiosity and ethics.

Convenient sampling technique was used in this thesis for allocating samples to major cities of Pakistan. Mall intercept method was adopted for administering the questionnaire. The final sample size was 907. Although the constructs used in the thesis had established reliability and validity, but they were re-ascertained in the case of Pakistani respondents. Subsequently, exploratory factor analysis and confirmatory factor analysis of all the constructs individually, for all the exogenous models and overall model were ascertained. The reliability and validity of the final constructs were reassessed prior to testing the derived hypotheses through simple and multiple regression analyses.

The proposed model was a good fit [ $\chi^2 (541, N = 907) = 8884.197$ ,  $RMSEA = 0.026 < 0.08$ ,  $RFI = 0.940 > 0.90$ ,  $IFI = 0.996 > 0.978$  and  $CFI = 0.978$ ] and hence was relevant in understanding Pakistan's consumer attitude towards counterfeit luxury products. All the five main hypotheses were accepted. Of the 12 sub-hypotheses only six were substantiated.

A positive relationship between attitude and purchase intention ( $\beta = 0.673$ ,  $p = 0.000 < 0.05$ ) was revalidated. It was also found that personal orientation ( $\beta = 0.607$ ,  $p = 0.000 < 0.05$ ) was the strongest predictor of attitude, followed by moral orientation ( $\beta = 0.530$ ,  $p = 0.000 < 0.05$ ) and social orientation ( $\beta = 0.493$ ,  $p = 0.000 < 0.05$ ).

Of the five personal orientation factors materialism was the strongest predictor, followed by status consumption, personal gratification and value consciousness. However, the effect of perceived risk on attitude was insignificant. The most significant sub-factor of moral orientation was ethics followed by relativism, idealism and religiosity. In case of social orientation factors, individualism was the strongest predictor, followed by informative susceptibility while the weakest predictor was collectivism. Whereas, normative susceptibility was dropped at the SEM stage and therefore it was not considered at the regression analysis stage. Contribution to theory, implications for managers and policy makers, limitation and suggestions for future research were derived from the results and explained further in the thesis.

Graduating Student : Tariq Jalees  
Supervisor : Prof Dr Ernest Cyril De Run



# Grading Sarawak Pepper

## *Using Machine Learning Algorithms*

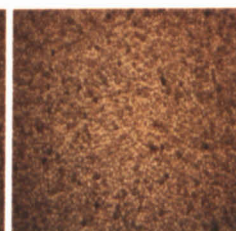


Pepper or the scientific name *Piper Nigrum* is grown predominantly in the state of Sarawak, Malaysia. With the production of 98%, the pepper of Malaysian origin is traded in the world market as Sarawak Pepper. Malaysian Pepper Board (MPB), a statutory body established under the Malaysian Pepper Board Act 2006, oversees all pepper related activities in the country, including the grading of all pepper for export. Processed pepper berries are graded by size, colour, moisture content, and extraneous matter content. There are six grades of white pepper berries and five grades of black pepper berries. At present, processed pepper berries are graded manually. This process is time consuming and error prone as it is very much dependent on the experience of the pepper grader. MPB is seeking alternative methods to execute the grading process more accurately and more reliably. To overcome these weaknesses, we propose an automated Pepper Grading System which employs image

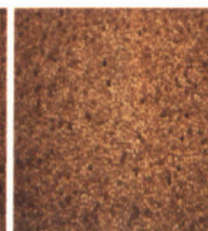
processing and machine learning using image features and moisture content data of the pepper berries. In this research project, we investigate the use of using twenty machine learning algorithms to classify the white pepper berries into its respective grades based on image features, which is part of our research work towards an automated Pepper Grading System. We found that *Rotation Forest* was the best classifier.



Grade 1: Standard Malaysian White  
Pepper No. 1 (Cream Label)



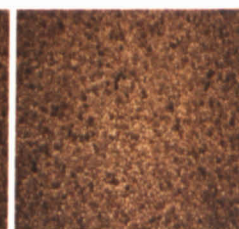
Grade 2: Sarawak Special White  
(Green Label)



Grade 3: Sarawak FAQ White  
(Blue Label)



Grade 4: Sarawak Field White  
(Orange Label)



Grade 5: Sarawak Coarse Field White  
(Grey Label)

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